



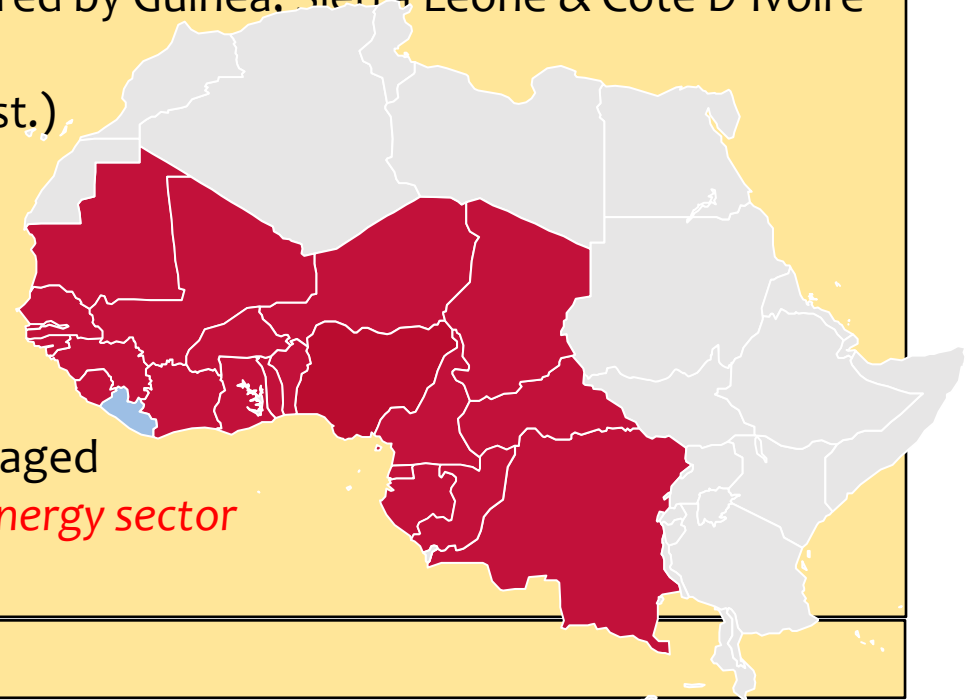
Country Presentation at the Annual ECOWAS-EIS Workshop: LIBERIA

- **Comfort Feah**
- **Clayton N. Somwabi**

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Liberia: Country Overview

- Location – Liberia is within the West Africa Sub-region bordered by Guinea, Sierra Leone & Cote D'Ivoire
- Land Area – 113,370 km² (square kilometers)
- Population – Has a population of about 5.057 million (2020 Est.)
- Principal Exports – Rubber, Timber, Gold, iron ore, diamonds
- GDP/capita – US\$633 (current US\$ in 2020)
- Access to electricity – about 27% (2020 Est.)
- Liberia had a long civil war – 14 years which ended 2003
- Ebola added to the difficulties – 2014-2016
- The energy sector infrastructure and systems were badly ravaged
- *These developments have resulted in major challenges in the energy sector*



The whole Liberian economy, including the energy sector, is being revamped following the Civil War

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Institutional Anchoring of Energy Data Collection and Publication

- **Legal Regime:**

- *Ministry of Mines and Energy (MME) established under Peoples' Redemption Council Decree No. 55, in 1981 to be responsible for policy formulation and oversight over all energy matters*

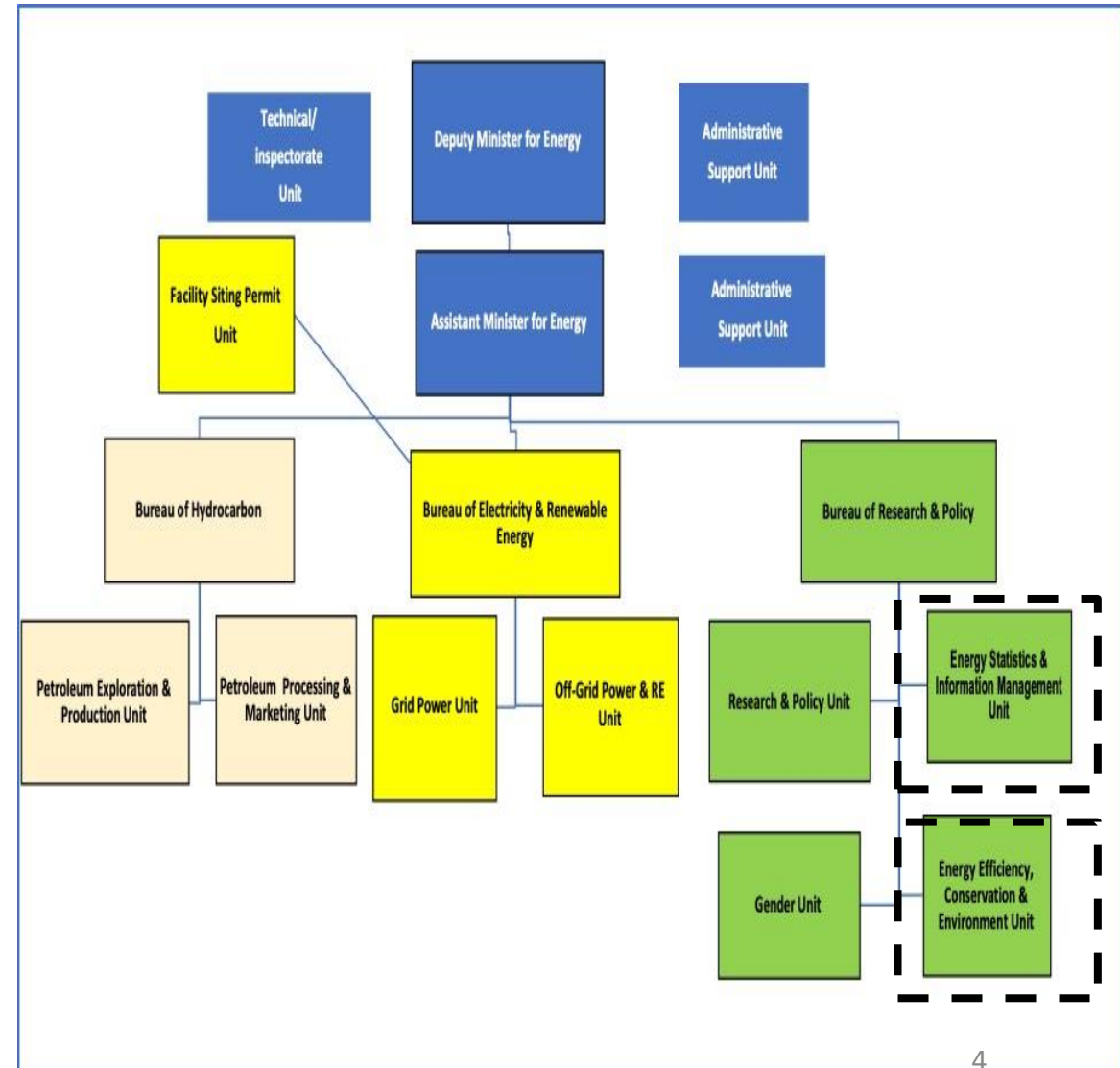
- **Institution Responsible:**

- *Department of Energy (DOE) has been established under the 2015 Electricity Law of Liberia to provide technical support for the MME*
- *DOE is the Anchor for Energy Data Collection and Publication*
- *DOE has Energy Statistics & Information Management Unit*
- *DOE has Energy Efficiency & Environment Unit*

- **Institutions Involved:**

- *Liberia Electricity Corporation (LEC)*
- *Rural and Renewable Energy Agency (RREA)*
- *Liberia Electricity Regulatory Commission (LERC)*
- *Liberia Petroleum Refining Corporation (LPRC)*
- *National Oil Company of Liberia (NOCAL)*
- *Liberia Petroleum Regulatory Authority (LPRA)*
- *Liberia Institute of Statistical and Geo-Information Services (LISGIS)*

Department of Energy (DOE) Organogram



Methodology of Data Collection

- **Brief Description of Data Collection Process:**

- *Raw Data request forms/templates are prepared by DOE and sent to each of the relevant Agencies*
- *Data forms are completed and returned to the MME/DOE on monthly basis*
- *DOE enters raw data into the appropriate excel sheets*
- *DOE follows up with the focal points in the Agencies to validate data submitted*
- *DOE reviews various reports prepared by the relevant agencies in order to reconcile the raw data submitted*
- *Charcoal and firewood prices are collected via market surveys on monthly basis*

- **Tools used for Data Collection**

- *Raw data collected are manually compiled into appropriate excel spreadsheets*
- *Summaries of data and balances are calculated automatically in excel spreadsheet*

Methodology of Data Collection (contd)

- **Description of Main Actors:**

- Liberia Electricity Corporation (LEC) – *State-owned Electricity Entity responsible for electricity generation, transmission, distribution and sale*
- Jungle Energy Power (JEP) – *Private Electricity Distribution Company involved in the Cross-border electricity market with La Cote D'Ivoire*
- Rural and Renewable Energy Agency (RREA) – *Responsible for rural energy and renewable energy promotion*
- Liberia Electricity Regulatory Commission (LERC) – *Responsible for regulating the Electricity Industry of Liberia*
- Liberia Petroleum Refining Corporation (LPRC) – *Responsible for the procurement and bulk supply of petroleum products*
- National Oil Company of Liberia (NOCAL) – *Responsible for Hydrocarbons: Upstream and Downstream operations*
- Liberia Petroleum Regulatory Authority (LPRA) – *Responsible for regulating the Petroleum Sector, both Upstream and Downstream*
- Liberia Institute of Statistical and Geo-Information Services (LISGIS) – *National Statistical Agency for collecting and storing all national census data*

Data Collected

- **Type of Data Collected and level of dissemination:**
 - For Energy data we collect – *electricity, petroleum, biomass production and consumption*
 - For Socio-economic data we collect – *income levels, poverty levels, GDP by Economic Sector (Industry, Agriculture, Mining, etc)*
 - For Demographic data we collect – *Total national population, Urban and Rural population, Average Household Size, Household Distribution, etc*
- **Data is collected from relevant agencies and institutions for conventional energy forms :**
 - *For Electricity, the principal agencies are LEC, LERC, JEP*
 - *For Petroleum products the principal agencies are LPRC and LPRA*
- **Estimates are used for biomass energy – charcoal, firewood, crop residue:** *Based on international benchmarks (peer country)*
- **Statistical Quality Assurance process and validation mechanisms:** – *Validations are done (i) first within the DOE Bureaus; and then (ii) with AFREC and ECREEE*
- **Limitations and Constraints:** *(i) inadequate funding support; (ii) inadequate human capacity; (iii) lack of relevant software*

Tools used in the development of the National Energy Balance and Indicators from Statistics

- **National Energy Balance:** *Is done manually using Excel Spreadsheets*
- **Energy Demand Planning Tools:** *No energy demand planning tools are currently being used. We intend to deploy the Long-term Energy Alternative Planning (LEAP) Model in developing an Integrated National Energy Plan for Liberia*
- **LCP selected at national level for biomass and others** – *No LCP has been selected at the national level.*

Tools used in the dissemination of statistics to the public

- **Website:** *The Ministry of Mines and Energy has a website (www.mme.gov.lr) but it is not very active in energy matters. We are in the process of developing a dedicated website for the DOE as well to enhance dissemination of energy information*
- **Report and Periodicity:** *We report quarterly to AFREC, ECOWAS*
- **National Validation Seminar with data providers and others:** *This activity is Not Regular*

Status on Energy Efficiency

- **Domestic (households)**

- *Lighting is largely from Compact Fluorescent Lamps (CFLs) and Light Emitting Diodes (LEDs)*
- *Even though there is no law banning it, incandescent lamps are rare*
- *Improved cookstoves, even though available on the market, it is sparsely used*

- **Industrial**

- *Efficient lighting appliances are widely used*
- *There a general unawareness of energy conservation in industry*

- **Services**

- *Lighting is largely by CFLs and LEDs*

- **Transport**

- *Efficiency measures in transport sector has not been prioritized and effort in this area is low – almost non-existent*

- **Standards**

- *No appliance standards in place yet. Efforts are being made to adopt some standards for various appliances – The MME and LERC have began the process of adopting standards for appliances in Liberia*

Status on Energy Efficiency

Recommendations under the National Energy Efficiency Action Plan for Liberia By ECREEE in 2016

Targets for Energy Efficiency in Residential households

- 1) *Ensure universal access to improved cook-stoves to 100% by 2020. This target has been missed;*
- 2) *Increase the share of the population served with modern fuel alternatives including LPG for cooking to 36% by 2020 and 41% by 2030;*
- 3) *Increase the share of efficient charcoal production to 60% by 2020 and 80% by 2030. The 2020 target has been missed;*

Targets for energy efficiency in transport

- 1) *Limiting the age of the vehicles that can be imported, beyond which the tax rate would be substantially higher as a disincentive for importing vehicles beyond (say 10 years old or 150 thousand miles, whichever is first);*
- 2) *Improve the load carrying capacity of vehicles for a given fuel consumption/mile. This is not a major source of savings as it is already evident that most transport vehicles in Liberia are either overloaded or overused.*

Status on Energy Efficiency

Recommendations under the National Energy Efficiency Action Plan for Liberia By ECREEE in 2016

Energy Efficiency in Industry

- 1) *Create public awareness of the benefits of on-grid and off-grid efficient lighting*
- 2) *Demonstrate to stakeholders the advantage of efficient lighting*
- 3) *Create awareness of mandatory labels of efficient lighting*
- 4) *Develop and adopt fiscal instruments to reduce prices of efficient lighting appliances*

Need to Develop Standards

- 1) *Standards for power generation equipment and lighting appliances*
- 2) *Standards for efficient lighting for both on-grid and off-grid street lighting*
- 3) *Standards for appliances such as air conditioners, refrigerators, washing machines, electric water heaters, fans, transformers, power consumption meter, etc*
- 4) *Energy efficiency labels for appliances*

Resolving the Challenges: 2022-2024 Work Program for DOE

	Proposed Special Projects in 2022-2024 Work Program	Goal of Project
1.0	Energy Statistics and information Management Unit	
1.1	Establishment and Operationalization of a National Energy Data Processing and Information Center	To establish and operate a one-stop Center, equipped with the relevant staff, equipment and software to collect, analyze and disseminate reliable data and information on the energy sector of Liberia
1.2	Consolidation of National Energy Balance & Preparation of National Energy Statistics Bulletin	To facilitate energy planning, policy analyses and decision-making in Liberia
2.0	Energy Efficiency, Conservation & Environment Unit	
2.1	Survey on Energy Use in the Residential, Industrial, Commercial and Services Sectors of the Economy	To assist in planning energy efficiency and conservation interventions across all sectors of the Liberian economy
2.2	Promoting Energy Efficiency Appliance Market in Liberia	To transform the energy appliance market from obsolete and inefficient appliances to more modern and efficient appliances
2.3	Energy Efficiency and Conservation Awareness in GoL Agencies	To enable GoL institutions/agencies to reduce their electricity bills by conserving energy
2.4	Development and Implementation Public Awareness and Education Strategy for Promoting LPG in households, commercial enterprises and public institutions	To improve the social and economic well-being of Liberians by increasing access and use of LPG for cooking in Liberia

- When successfully completed, these “Special Projects” will:
 - (i) Modernize Energy Information and Statistics delivery in Liberia
 - (ii) Enhance Energy Efficiency & Conservation in Liberia

Concluding Remarks

- ❑ *The whole economy of Liberia, including the energy sector, is being revamped following the Civil War*
- ❑ *We are very much aware of the challenges facing the energy sector*
- ❑ *We are implementing some “Special Projects” to resolve some of the challenges especially in the areas of Energy Information and Energy Efficiency*
- ❑ *When successfully completed, these “Special Projects” will:*
 - (i) Modernize Energy Information and Statistics delivery in Liberia*
 - (ii) Enhance Energy Efficiency & Conservation in Liberia*



Thanks For Your Attention